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Search Results - Record(s) 31 through 40 of 41 returned.

☐ 31. Document ID: US 3593661 A

L3: Entry 31 of 41 File: USPT Jul 20, 1971

US-PAT-NO: 3593661
DOCUMENT-IDENTIFIER: US 3593661 A

TITLE: DRY INK-FILM PRINTING

DATE-ISSUED: July 20, 1971

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tripp; Kenneth Franklin	Hancock	NH		

US-CL-CURRENT: 101/175; 101/177, 101/40, 101/41

ABSTRACT:

This invention relates to ink film transfer and particularly to printing on surfaces by offset and direct printing techniques with an immediately dry image transfer of controlled thickness. When these techniques are employed in direct printing, the die or printing member is not inked directly with a fluent ink, but rather with a substantially dry ink-film, whereby small legend characters are not smothered or "filled-up."

1 Claims, 11 Drawing figures Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. D

☐ 32. Document ID: JP 10247048 A

L3: Entry 32 of 41 File: JPAB Sep 14, 1998

PUB-NO: JP410247048A
DOCUMENT-IDENTIFIER: JP 10247048 A
TITLE: CLEANING BLADE AND ITS PRODUCTION

PUBN-DATE: September 14, 1998

INVENTOR-INFORMATION:

NAME	COUNTRY

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Tuesday, June 14, 2005

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ		
☐	L14	L13 and 134/$.ccls.	3
☐	L13	hot forming die	77
☐	L12	die and mold$	133130
☐	L11	die and spraying	19375
☐	L10	L9 and 134/5.ccls.	1
☐	L9	die cleaning	241
☐	L8	hot die	1112
☐	L7	L5 and spraying	16
☐	L6	L5 and heating	34
☐	L5	l1 and 134/$.ccls.	102
☐	L4	L3 and binder	3
☐	L3	l1 and (forming material)	41
☐	L2	die same cleaning	4980
☐	L1	die with cleaning	2780

END OF SEARCH HISTORY

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Tuesday, June 14, 2005

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ		
☐	L10	L9 and 134/5.ccls.	1
☐	L9	die cleaning	241
☐	L8	hot die	1112
☐	L7	L5 and spraying	16
☐	L6	L5 and heating	34
☐	L5	l1 and 134/$.ccls.	102
☐	L4	L3 and binder	3
☐	L3	l1 and (forming material)	41
☐	L2	die same cleaning	4980
☐	L1	die with cleaning	2780

END OF SEARCH HISTORY

KIKUCHI, HIROBUMI
MACHIDA, KUNIO

INT-CL (IPC): G03 G 21/10; B29 C 33/14; B29 C 39/10; B29 C 39/26; B29 D 31/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw. De

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☐ 33. Document ID: JP 09066312 A

L3: Entry 33 of 41 File: JPAB Mar 11, 1997

PUB-NO: JP409066312A
DOCUMENT-IDENTIFIER: JP 09066312 A
TITLE: STORAGE METHOD FOR HOLLOW DIE MADE OF SINTERED HARD ALLOY

PUBN-DATE: March 11, 1997

INVENTOR-INFORMATION:
NAME COUNTRY
OIDE, MASAAKI
YAMANAKA, MASAKI

INT-CL (IPC): B21 C 25/02

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw. De

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☐ 34. Document ID: JP 08283036 A

L3: Entry 34 of 41 File: JPAB Oct 29, 1996

PUB-NO: JP408283036A
DOCUMENT-IDENTIFIER: JP 08283036 A
TITLE: METHOD FOR CLEANING FORMING DIE OF OPTICAL ELEMENT FORMING DEVICE

PUBN-DATE: October 29, 1996

INVENTOR-INFORMATION:
NAME COUNTRY
SHIOKAWA, TAKANOBU
FUSE, HIROAKI

INT-CL (IPC): C03 B 40/02; C03 B 11/00; C03 B 11/08

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw. De

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☐ 35. Document ID: JP 58193128 A

L3: Entry 35 of 41 File: JPAB Nov 10, 1983

PUB-NO: JP358193128A
DOCUMENT-IDENTIFIER: JP 58193128 A
TITLE: CLEANING METHOD OF EXTRUSION-MOLDING METAL DIE

PUBN-DATE: November 10, 1983

INVENTOR-INFORMATION:

NAME	COUNTRY
NAKAMURA, TAKAYUKI	

US-CL-CURRENT: 264/39
INT-CL (IPC): B29F 3/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

☐ 36. Document ID: JP 58193127 A

L3: Entry 36 of 41 File: JPAB Nov 10, 1983

PUB-NO: JP358193127A
DOCUMENT-IDENTIFIER: JP 58193127 A
TITLE: CLEANING METHOD OF EXTRUSION-MOLDING METAL DIE

PUBN-DATE: November 10, 1983

INVENTOR-INFORMATION:

NAME	COUNTRY
NAKAMURA, TAKAYUKI	

US-CL-CURRENT: 264/39
INT-CL (IPC): B29F 3/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

☐ 37. Document ID: JP 2002036310 A

L3: Entry 37 of 41 File: DWPI Feb 5, 2002

DERWENT-ACC-NO: 2002-376107
DERWENT-WEEK: 200263
COPYRIGHT 2005 DERWENT INFORMATION LTD
TITLE: Molding method of micro-relay element, involves branching pair of molten material supply routes from main path, in the valve housing

PRIORITY-DATA: 2000JP-0224358 (July 25, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2002036310 A	February 5, 2002		007	B29C045/38

INT-CL (IPC): B29 C 45/38; H01 H 11/00; H01 H 49/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

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☐ 38. Document ID: JP 2002011756 A

L3: Entry 38 of 41 File: DWPI Jan 15, 2002

DERWENT-ACC-NO: 2002-419850
DERWENT-WEEK: 200279
COPYRIGHT 2005 DERWENT INFORMATION LTD
TITLE: Manifold of hot runner-type metallic mold for resin molding, uses hot runner formed between detachable die elements of insert die to form material route to mold cavity

PRIORITY-DATA: 2000JP-0194594 (June 28, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2002011756 A	January 15, 2002		007	B29C045/26

INT-CL (IPC): B29 C 45/26

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

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☐ 39. Document ID: JP 08283036 A

L3: Entry 39 of 41 File: DWPI Oct 29, 1996

DERWENT-ACC-NO: 1997-017193
DERWENT-WEEK: 199702
COPYRIGHT 2005 DERWENT INFORMATION LTD
TITLE: Cleaning of forming die of optical element forming appts. - by sandwiching cleaning material between pair of forming dies, heating, and forming under heating

PRIORITY-DATA: 1995JP-0087267 (April 12, 1995)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 08283036 A	October 29, 1996		004	C03B040/02

INT-CL (IPC): C03 B 11/00; C03 B 11/08; C03 B 40/02

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

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☐ 40. Document ID: JP 05096602 A

L3: Entry 40 of 41 File: DWPI Apr 20, 1993

DERWENT-ACC-NO: 1993-163938
DERWENT-WEEK: 199320

TITLE: Cleaning of die for forming honeycomb filter - by soaking in cleaning soln. contg. hydrolytic enzyme having acidic pH and applying ultra:sonic vibration

PRIORITY-DATA: 1991JP-0265080 (October 14, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 05096602 A	April 20, 1993		004	B29C047/08

INT-CL (IPC): B08B 3/08; B29C 47/08; C11D 7/42

Term	Documents
FORMING	4275701
FORMINGS	555
MATERIAL	5704415
MATERIALS	2305238
(1 AND (FORMING ADJ MATERIAL)).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	41
(L1 AND (FORMING MATERIAL)).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	41

L3: Entry 37 of 41 File: DWPI Feb 5, 2002

DERWENT-ACC-NO: 2002-376107
DERWENT-WEEK: 200263

TITLE: Molding method of micro-relay element, involves branching pair of molten material supply routes from main path, in the valve housing

PATENT-ASSIGNEE: MITSUBISHI MATERIALS CORP (MITV), OMRON KK (OMRO)

PRIORITY-DATA: 2000JP-0224358 (July 25, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2002036310 A	February 5, 2002		007	B29C045/38

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2002036310A	July 25, 2000	2000JP-0224358	

INT-CL (IPC): B29 C 45/38; H01 H 11/00; H01 H 49/00

ABSTRACTED-PUB-NO: JP2002036310A
BASIC-ABSTRACT:

NOVELTY - A pair of molten material supply routes (28) are branched from a main path (27) formed in valve housing (24), which are connected to a pair of gates (22). A set of valve pins (41) are provided integrally for opening and closing the gates.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for valve gate apparatus.

USE - For molding micro relay element.

ADVANTAGE - Reduces the outer diameter of the valve housing by providing a main inlet in the valve housing and branching from main inlet. Enables easy cleaning of material route by forming material inlet between the insert dies which are detachedly provided in the valve housing. Reduces the size of entire gate apparatus by making the gap between the product cavities small by providing a single inlet in the valve housing.

DESCRIPTION OF DRAWING(S) - The figure shows a sectional view of valve gate apparatus.

Gate 22

Valve housing 24

Main path 27

Molten material supply routes 28

Rate pins 41

ABSTRACTED-PUB-NO: JP2002036310A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1/4

DERWENT-CLASS: A32 A85 V03
CPI-CODES: A11-B01; A12-E07;
EPI-CODES: V03-C07; V03-D04; V03-D06B;

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L4: Entry 3 of 3 File: DWPI Apr 20, 1993

DERWENT-ACC-NO: 1993-163938
DERWENT-WEEK: 199320

TITLE: Cleaning of die for forming honeycomb filter - by soaking in cleaning soln. contg. hydrolytic enzyme having acidic pH and applying ultra:sonic vibration

Basic Abstract Text (1):
A porous honeycomb filter having through holes is formed using a forming material contg. a binder comprising polysaccharides with the die. The die is then cleaned by soaking in a cleaning soln. contg. hydrolytic enzyme having a pH of 4.0-4.5 at 40-60 deg.C for 30-180 mins. while applying ultrasonic vibration.

Basic Abstract Text (3):
USE/ADVANTAGE - The method cleans the die for forming honeycomb. The hydrolytic enzyme reduces the bonding strength of the forming material contg. the organic binder. The result positively removes the forming material stuck on the used die in a short time

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L4: Entry 3 of 3 File: DWPI Apr 20, 1993

DERWENT-ACC-NO: 1993-163938
DERWENT-WEEK: 199320

TITLE: Cleaning of die for forming honeycomb filter - by soaking in cleaning soln. contg. hydrolytic enzyme having acidic pH and applying ultra:sonic vibration

PATENT-ASSIGNEE: IBIDEN CO LTD (IBIG)

PRIORITY-DATA: 1991JP-0265080 (October 14, 1991)

Search Selected Search ALL Clear

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 05096602 A	April 20, 1993		004	B29C047/08

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 05096602A	October 14, 1991	1991JP-0265080	

INT-CL (IPC): B08B 3/08; B29C 47/08; C11D 7/42

ABSTRACTED-PUB-NO: JP 05096602A
BASIC-ABSTRACT:

A porous honeycomb filter having through holes is formed using a forming material contg. a binder comprising polysaccharides with the die. The die is then cleaned by soaking in a cleaning soln. contg. hydrolytic enzyme having a pH of 4.0-4.5 at 40-60 deg.C for 30-180 mins. while applying ultrasonic vibration.

The hydrolytic enzyme pref. comprises Cellulase having a concn. of 0.1-1.0%.

USE/ADVANTAGE - The method cleans the die for forming honeycomb. The hydrolytic enzyme reduces the bonding strength of the forming material contg. the organic binder. The result positively removes the forming material stuck on the used die in a short time

ABSTRACTED-PUB-NO: JP 05096602A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/1

DERWENT-CLASS: A35 D16 D25 L02 P43
CPI-CODES: A03-A; A11-C; A12-H04; A12-R06; D05-A02C; D11-B02; D11-B03;

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L3: Entry 34 of 41 File: JPAB Oct 29, 1996

DOCUMENT-IDENTIFIER: JP 08283036 A
TITLE: METHOD FOR CLEANING FORMING DIE OF OPTICAL ELEMENT FORMING DEVICE

Abstract Text (1):
PURPOSE: To remove the foreign matter deposited on surfaces and to improve the life and cost of forming dies by replacing a forming material with a cleaning material in midway and heating and forming this material in a state below a specific viscosity at the time of holding a forming material between a pair of upper and lower forming dies and heating, softening and press forming the forming material.

Abstract Text (2):
CONSTITUTION: A glass preform is placed on the lower forming die 20 and the upper forming die 10 is inserted into a drum mold 25 down to a level at which this die does not come into contact with the preform. The upper and lower forming dies 10 and 20 are held in a gaseous nitrogen charging atmosphere and the preform is heated. The upper forming die 10 is lowered by a lifting cylinder rod 27 at the point of the time when the prescribed viscosity is attained, by which the preform is press-formed. The gas is vented after cooling and the formed material is taken out. The fine foreign matter deposits increasingly on the surfaces of the upper and lower forming dies 10 and 20 when the forming is repeated. The forming material is replaced with the cleaning material which attains the viscosity lower than the viscosity of the forming material at approximately the same heating temp. as the heating temp. of the forming material at the point of this time. The cleaning material is heated and formed until the lower viscosity state of $\leqslant$108.0 poises is attained, by which the deposited fine foreign matter 10F is taken into the cleaning material CG and the forming dies 10, 20 are cleaned.

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(19)日本国特許庁（ＪＰ）　(12)公開特許公報（A）　(11)特許出願公開番号

特開平8－283036

(43)公開日　平成８年(1996)10月29日

(51)Int.Cl.[6]	識別記号	庁内整理番号	ＦＩ		技術表示箇所
Ｃ０３Ｂ 40/02			Ｃ０３Ｂ 40/02		
11/00			11/00	A	
11/08			11/08		

審査請求　未請求　請求項の数６　ＯＬ　（全４頁）

(21)出願番号　特願平7－87267

(22)出願日　平成７年(1995)４月12日

(71)出願人　000000527
旭光学工業株式会社
東京都板橋区前野町２丁目36番９号

(72)発明者　塩川　孝紳
東京都板橋区前野町２丁目36番９号　旭光学工業株式会社内

(72)発明者　布施　広昭
東京都板橋区前野町２丁目36番９号　旭光学工業株式会社内

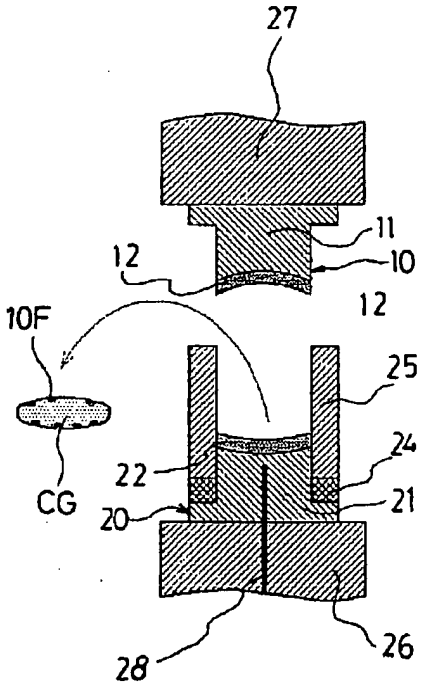
(74)代理人　弁理士　三浦　邦夫

(54)【発明の名称】　光学素子成形装置の成形型の浄化方法

(57)【要約】

【目的】　光学素子の成形型表面の浄化を可能とし、成形型の寿命を延ばすことができる方法を得る。

【構成】　一対の上下の成形型間に成形材料を挟着し、該成形材料を加熱軟化させて該一対の成形型により押圧成形する光学素子成形装置において、一対の成形型間に浄化材料を挟着し、この浄化材料を$10^{8.0}$ ポアズ以下の低粘度状態となるように加熱し、この加熱下で、該浄化材料を一対の成形型により成形する成形型の成形方法。



1

【特許請求の範囲】

【請求項1】　一対の上下の成形型間に成形材料を挟着し、該成形材料を加熱軟化させて該一対の成形型により押圧成形する光学素子成形装置において、

上記一対の成形型間に浄化材料を挟着し、この浄化材料を$10^{8.0}$ ポアズ以下の低粘度状態となるように加熱し、この加熱下で、該浄化材料を一対の成形型により成形することを特徴とする光学素子成形装置の成形型の浄化方法。

【請求項2】　請求項1において、浄化材料は、成形材料とほぼ同一の加熱温度で、成形材料より低粘度となるガラス材料である成形型の浄化方法。

【請求項3】　一対の上下の成形型間に成形材料を挟着し、該成形材料を加熱軟化させて該一対の成形型により押圧成形する光学素子成形装置において、

上記一対の成形型間に浄化材料を挟着し、この浄化材料を上記成形材料の成形時の粘度より低粘度になるように加熱し、この加熱下で、該材料を一対の成形型により成形することを特徴とする光学素子成形装置の成形型の浄化方法。

【請求項4】　請求項3において、成形材料の成形時の粘度は10^{11}～10^{9} ポアズであり、浄化材料の粘度は10^{8} ポアズ以下である成形型の浄化方法。

【請求項5】　請求項3または4において、成形材料と浄化材料はともに、ガラス材料である成形型の浄化方法。

【請求項6】　請求項3ないし5のいずれか1項において、浄化材料の量は、成形材料の量より多い成形型の浄化方法。

【発明の詳細な説明】

【0001】

【技術分野】本発明は、加熱して軟化させた光学成形材料を一対の光学素子成形型で成形する成形装置に関し、特にその成形型の浄化方法に関する。

【0002】

【従来技術およびその問題点】この種の光学素子成形装置は、例えばガラスレンズの成形に広く用いられている。ガラスレンズの成形は、予め秤量したガラスプリフォームを上下の成形型に挟み、加熱軟化させた状態で上下の成形型に押圧力を与えて、成形する。この成形装置では、同一の成形型での成形を繰り返すと、成形型表面に酸化異物やガラスプリフォームからの揮発物等が蓄積される。このため、成形型表面の劣化、成形されたレンズの曇り、成形型からの離型性の悪化等の悪影響が生じる。従来、このような現象を防止する抜本策はなく、高価な成形型の頻繁な交換を余儀なくされていた。

【0003】

【発明の目的】本発明は、光学素子の成形型表面の浄化を可能とし、成形型の寿命を延ばすことができる方法を得ることを目的とする。

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【0004】

【発明の概要】本発明は、成形型間に挟着する成形材料を、通常の成形時の粘度より柔らかくすると、成形型の表面を浄化できることを発見してなされたものである。本発明は、その一態様によると、一対の上下の成形型間に成形材料を挟着し、該成形材料を加熱軟化させて該一対の成形型により押圧成形する光学素子成形装置において、一対の成形型間に浄化材料を挟着し、この浄化材料を$10^{8.0}$ ポアズ以下の低粘度状態となるように加熱し、この加熱下で、該浄化材料を一対の成形型により成形することを特徴としている。

【0005】浄化材料は、成形材料とほぼ同一の加熱温度で、成形材料より低粘度となるガラス材料を用いると、成形型の加熱装置の加熱温度を変更する必要がない。

【0006】また、本発明は、別の態様によると、一対の上下の成形型間に成形材料を挟着し、該成形材料を加熱軟化させて該一対の成形型により押圧成形する光学素子成形装置において、一対の成形型間に浄化材料を挟着し、この浄化材料を成形材料の成形時の粘度より低粘度になるように加熱し、この加熱下で、該材料を一対の成形型により成形することを特徴としている。

【0007】つまり、浄化材料を成形材料の粘度より柔らかくして、成形材料と同様に成形すると、成形型表面の浄化が期待できる。具体的には、成形材料の成形時の粘度が10^{11}～10^{9} ポアズであるとき、浄化材料の粘度は10^{8} ポアズ以下とすることが好ましい。成形材料と浄化材料は、少なくともともにガラス材料であるとき、本発明の効果を期待できる。浄化材料の量は、成形材料の量より多く設定すると、成形型の全表面を確実に浄化できる。

【0008】成形材料よりも柔らかくした浄化材料を成形すると、成形型表面を浄化できるメカニズムは、必ずしも明らかではないが、次のように推論できる。繰り返し成形により成形型表面に蓄積された異物は、非常に細かな粒子状で存在し、成形型表面を粗すと考えられる。ところが、成形材料より柔らかい（低粘度の）浄化材料を成形すると、浄化材料がこれら異物の粒子間に入り込んで異物粒子を取り込んでしまい、その結果、成形型表面が浄化されるのである。勿論、この推論とは別の原理で成形型表面の浄化が行なわれるとしても、本発明の効果は実験の証明するところであり、その有効性は損なわれない。

【0009】

【発明の実施例】以下図面について本発明を説明する。図1ないし図4は、本発明の対象とする光学素子成形装置の一例を示す。上下の成形型10、20は、母材11、21上に成形膜12、22を付してなっている。母材11、21は、例えば超硬合金タングステンカーバイドWCからなるもので、その成形面は超精密旋盤で研削

された後、ダイヤモンド研磨剤を用いて表面粗さR_{MAX}＝0．02μm以下になるように研磨される。保護膜（皮膜）12、22は、この成形面上に、耐熱性、耐酸化性、耐濡れ性の改善を目的として、例えばスパッタリングにより1μm厚程度が成形される。この保護膜12は、例えば白金からなる。

【0010】この上下の成形型10と20のうち、下成形型20は、スペーサ24と胴型25に組み合わされて基台26上に固定され、上成形型10は、昇降シリンダロッド27に固定されている。28は、温度測定用の熱電対である。

【0011】光学素子（ガラスレンズ）の成形に当っては、下成形型20上にガラスプリフォームを載せ、上成形型10をこのプリフォームには接触しないレベル迄、胴型25内に挿入する。また、上下の成形型10と20の周囲に、石英管30を位置させて閉じられたガスチャージ室31を形成し、このガスチャージ室31内に、窒素ガスをチャージする。そして、石英管30の外側に位置させたヒータ32により、上下の成形型10、20とともにプリフォームを加熱する。プリフォームの粘度が約10^{11}～10^{9} ポアズになった時点で、昇降シリンダロッド27により上成形型10を下降させて、上下成形型10と20の成形面の形状をプリフォームに移し、レンズを成形する。プリフォームが10^{11}ポアズを越える高粘度のとき成形すると、プリフォームが割れてしまう。成形終了後、ヒータ32を止めて冷却し、温度がガラス転移点以下となったときに、上成形型10を上昇させ、ガスチャージ室31内のガスを抜き、成形されたガラスレンズを取り出す。

【0012】具体例で説明すると、プリフォームとして『VC78』（住田光学ガラス製）を用いるときには、温度が590℃になった時点（粘度は約10^{10}ポアズ）で成形を開始し、成形終了後、温度が480℃になった時点で取り出す。

【0013】以上のガラスレンズの成形を繰り返すと、上下の成形型10と20の表面には、図1、図2に誇張して示すように、微細異物10Fが堆積されてくる。

【0014】本発明は、この微細異物10Fを効果的に除去する浄化方法であり、成形用のプリフォームに代えて、浄化用のプリフォームCPを下成形型20の上に載置し、これを成形時のプリフォームより柔らかくなるように加熱し、ガラス成形時と全く同じように成形することにより、浄化成形ガラスCG内に微細異物10Fを取り込むのである。浄化用のプリフォームCPは、粘度が上成形型10^{8} ポアズ以下の低粘度となるように加熱することが好ましい。

【0015】具体例で説明すると、浄化用のプリフォームCPとして、『PSK50ガラス』（住田光学ガラス製）を用い、先の具体的な成形例と同じ590℃迄加熱した。このときの粘度は$10^{7.5}$ ポアズであった。また、このときの浄化用のプリフォームCPは、『VC78』のプリフォームよりも10重量%大きいプリフォームを用いた。浄化用のプリフォームCPは成形を目的とするものではないため、成形時のプリフォームより大きいものを用いることができ、大きいものは、上成形型10と下成形型20の成形有効面と確実に接触するので、より確実に微細異物10Fの除去ができる。

【0016】この浄化処理（再生処理）の後、上下の成形型10、20の成形面表面を顕微鏡検査したところ、異物のない成形初期の表面と同等の面であることが確認され、更に、次の成形を続行したところ、良好なガラスレンズが得られた。

【0017】本発明による浄化処理は、例えば1000回の成形毎に行なうことにより、成形型の長寿命化を図ることができる。

【0018】

【発明の効果】本発明によれば、光学素子成形型の表面に堆積される異物を効果的に除去し、成形型の寿命を長くして、成形品のコストを下げることができる。

【図面の簡単な説明】

【図1】本発明の対象とする光学素子成形装置に用いる成形型の模式断面図である。

【図2】同光学素子成形装置の浄化材料による成形前の状態を示す模式断面図である。

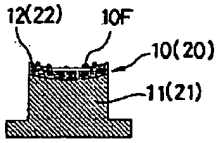
【図3】同成形時の状態を示す模式断面図である。

【図4】本発明の浄化方法による成形型の浄化の様子を示す模式図である。

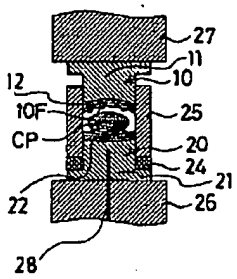
【符号の説明】

10　上成形型
12　22　保護膜
10F　異物
20　下成形型
CP　浄化用プリフォーム
CG　浄化成形ガラス

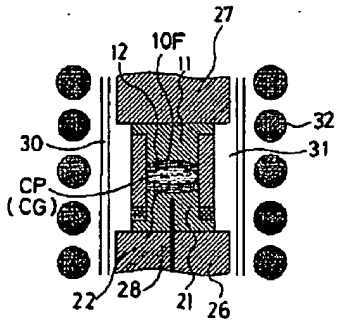
【図1】



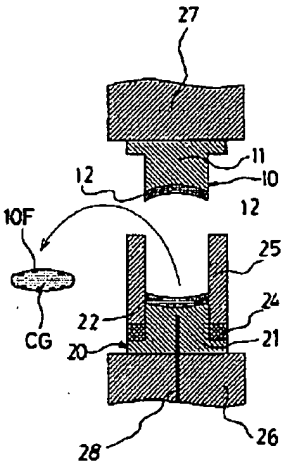
【図2】


27
11
10
12
10F
25
CP
20
24
21
22
26
28

【図3】


27
12
10F
11
32
30
31
CP
(CG)
22
28
21
26

【図4】


27
11
10
12
12
10F
25
24
22
21
CG
20
28
26

L3: Entry 40 of 41 File: DWPI Apr 20, 1993

DERWENT-ACC-NO: 1993-163938
DERWENT-WEEK: 199320

TITLE: Cleaning of die for forming honeycomb filter - by soaking in cleaning soln. contg. hydrolytic enzyme having acidic pH and applying ultra:sonic vibration

PATENT-ASSIGNEE: IBIDEN CO LTD (IBIG)

PRIORITY-DATA: 1991JP-0265080 (October 14, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 05096602 A	April 20, 1993		004	B29C047/08

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 05096602A	October 14, 1991	1991JP-0265080	

INT-CL (IPC): B08B 3/08; B29C 47/08; C11D 7/42

ABSTRACTED-PUB-NO: JP 05096602A
BASIC-ABSTRACT:

A porous honeycomb filter having through holes is formed using a forming material contg. a binder comprising polysaccharides with the die. The die is then cleaned by soaking in a cleaning soln. contg. hydrolytic enzyme having a pH of 4.0-4.5 at 40-60 deg.C for 30-180 mins. while applying ultrasonic vibration.

The hydrolytic enzyme pref. comprises Cellulase having a concn. of 0.1-1.0%.

USE/ADVANTAGE - The method cleans the die for forming honeycomb. The hydrolytic enzyme reduces the bonding strength of the forming material contg. the organic binder. The result positively removes the forming material stuck on the used die in a short time

ABSTRACTED-PUB-NO: JP 05096602A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/1

DERWENT-CLASS: A35 D16 D25 L02 P43
CPI-CODES: A03-A; A11-C; A12-H04; A12-R06; D05-A02C; D11-B02; D11-B03;

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L3: Entry 41 of 41 File: DWPI Mar 23, 1988

DERWENT-ACC-NO: 1988-122119
DERWENT-WEEK: 198818

TITLE: Optical glass element prodn. - includes forming material on dies, removing prod. from dies, cleaning dies with device on conveyor, etc.

PATENT-ASSIGNEE: MATSUSHITA ELEC IND CO LTD (MATU)

PRIORITY-DATA: 1986JP-0206352 (September 2, 1986)

Search Selected Search ALL Clear

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 63064929 A	March 23, 1988		003	
JP 95047492 B2	May 24, 1995		003	C03B011/00

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 63064929A	September 2, 1986	1986JP-0206352	
JP 95047492B2	September 2, 1986	1986JP-0206352	
JP 95047492B2		JP 63064929	Based on

INT-CL (IPC): C03B 11/00; C03B 35/00

ABSTRACTED-PUB-NO: JP 63064929A
BASIC-ABSTRACT:

Method comprises forming material in dies, withdrawing formed prod. from the dies, cleaning the dies using a device located on a conveyor, and returning the dies to a station for supplying the material to the dies.

USE/ADVANTAGE - Used to form optical glass elements such as lenses of compact disc players continuously and stably.

ABSTRACTED-PUB-NO: JP 63064929A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/3

DERWENT-CLASS: L01
CPI-CODES: L01-E04; L01-L05;

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Search Results - Record(s) 1 through 10 of 16 returned.

1. Document ID: US 20030127107 A1

L7: Entry 1 of 16 File: PGPB Jul 10, 2003

PGPUB-DOCUMENT-NUMBER: 20030127107
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030127107 A1

TITLE: Apparatus and method for removing coating layers from alignment marks

PUBLICATION-DATE: July 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Cheng, Aaron	Hsinchu		TW	
Wang, Ting-Chun	Taoyuan		TW	
Lin, Yu-Ku	Hsin-Chu city		TW	
Chen, Chun-Chang	Miao-Li		TW	
Wang, Yi-Lang	Tai-Chung		TW	

US-CL-CURRENT: 134/3; 134/153, 134/199, 134/28, 134/33, 134/36, 134/902, 134/95.3

ABSTRACT:

An apparatus and a method for removing coating layers from the top of alignment marks on a wafer are described. The apparatus includes a cleaning chamber that is a cavity and a lid member suspended in the cavity, a wafer chuck that is rotatably mounted in the lid member for holding a wafer in an upside down position such that the alignment marks are facing downwardly, and at least two solvent dispensing arms mounted in an outer peripheral area of the lid member that are immediately adjacent to the chuck for dispensing a flow of solvent upwardly toward the active surface of the wafer when the wafer is held in a stationary position, each of the at least two solvent dispensing arms are positioned corresponding to a position of one of the alignment marks.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

2. Document ID: US 6682605 B2

L7: Entry 2 of 16 File: USPT Jan 27, 2004

US-PAT-NO: 6682605

DOCUMENT-IDENTIFIER: US 6682605 B2

TITLE: Apparatus and method for removing coating layers from alignment marks

DATE-ISSUED: January 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chèng; Aaron	Hsinchu			TW
Wang; Ting-Chun	Taoyuan			TW
Lin; Yu-Ku	Hsin-Chu			TW
Chen; Chun-Chang	Miao-Li			TW
Wang; Yi-Lang	Tai-Chung			TW

US-CL-CURRENT: 134/3; 134/147, 134/148, 134/153, 134/18, 134/24, 134/26, 134/28, 134/29, 134/32, 134/33, 134/34, 134/41 , 134/42, 134/6, 134/902

ABSTRACT:

An apparatus and a method for removing coating layers from the top of alignment marks on a wafer are described. The apparatus includes a cleaning chamber that is a cavity and a lid member suspended in the cavity, a wafer chuck that is rotatably mounted in the lid member for holding a wafer in an upside down position such that the alignment marks are facing downwardly, and at least two solvent dispensing arms mounted in an outer peripheral area of the lid member that are immediately adjacent to the chuck for dispensing a flow of solvent upwardly toward the active surface of the wafer when the wafer is held in a stationary position, each of the at least two solvent dispensing arms are positioned corresponding to a position of one of the alignment marks.

6 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

☐ 3. Document ID: US 6121058 A

L7: Entry 3 of 16 File: USPT Sep 19, 2000

US-PAT-NO: 6121058
DOCUMENT-IDENTIFIER: US 6121058 A

TITLE: Method for removing accumulated solder from probe card probing features

DATE-ISSUED: September 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shell; Melissa K.	Sunnyvale	CA		
Yoshimoto; Richard S.	San Jose	CA		

US-CL-CURRENT: 438/4; 134/2, 134/3, 134/41, 134/6, 438/14

ABSTRACT:

A method for removing deposits from a probing feature of a probe card. The method includes the step of exposing the probing feature of a probe card to a composition that chemically reacts with the deposits on the probing feature to remove the deposits from the probing feature while not substantially effecting the material comprising the probing feature.

23 Claims, 12 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

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4. Document ID: US 5536331 A

L7: Entry 4 of 16 File: USPT Jul 16, 1996

US-PAT-NO: 5536331
DOCUMENT-IDENTIFIER: US 5536331 A

TITLE: Process for cleaning tabletting, pan-coating and granulating machines, especially rotary tabletting presses

DATE-ISSUED: July 16, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Korsch; Wolfgang	Berlin			DE

US-CL-CURRENT: 134/21; 134/18, 134/2, 134/22.1, 134/22.19, 134/24, 134/29, 134/30, 134/31, 134/37

ABSTRACT:

A process for cleaning tabletting, pan-coating and granulating machines, especially rotary tabletting presses, with a treatment chamber including at least the rotor. To ensure the complete removal of the liquid residues from the treatment chamber and from the components left in the treatment chamber, especially of the rotor of a rotary tabletting press using small amounts of cleaning and rinsing liquids, a cleaning agent and a rinsing agent are sprayed within the treatment chamber and then drained off. All openings of the treatment chamber are then closed, and a vacuum of about 0.1 to 0.2 bar (absolute pressure) is generated within the sealed treatment chamber. The vacuum drains the residual liquid from all holes and joints of the rotor and from the treatment chamber.

12 Claims, 1 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

☐ 5. Document ID: US 5525371 A

L7: Entry 5 of 16 File: USPT Jun 11, 1996

US-PAT-NO: 5525371
DOCUMENT-IDENTIFIER: US 5525371 A

TITLE: Method for cleaning parts soiled with oil components and separating terpenes from oil compositions with a ceramic filter

DATE-ISSUED: June 11, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sweeney; Eric L.	Lakewood	CO		
Hamilton; C. Richard	Arvada	CO		

US-CL-CURRENT: 427/327; 134/10, 134/26, 134/40, 210/651, 210/653

ABSTRACT:

A method is provided for cleaning parts soiled with oil components and seating terpenes from oil compositions using filters having suitable pore sizes to allow terpene components to pass through the walls of the filter as a permeate while not allowing oil components to pass therethrough. A separate aspect of the present invention utilizes a ceramic filter capable of separating water components from a mixture of terpenes and oil, thus allowing filtered water to be reused in a cleaning procedure. Using both types of filters in one operation provides a substantially closed loop recycling system where terpene components can be reused to clean additional articles, water can be reused to rinse such articles and contaminants removed in the cleaning process can be either reused or disposed of.

10 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 6. Document ID: US 5453129 A

L7: Entry 6 of 16 File: USPT Sep 26, 1995

US-PAT-NO: 5453129
DOCUMENT-IDENTIFIER: US 5453129 A

TITLE: Oil spill recovery method

DATE-ISSUED: September 26, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Allen; Martin A.	Dawsonville	GA		
Fetcko; John T.	Dawsonville	GA		

US-CL-CURRENT: 134/4; 134/10, 134/40, 134/42, 134/6

ABSTRACT:

A method and apparatus for oil cleanup or protection includes meltblowing equipment mounted on a vessel or vehicle for the generation and deposition of an oil absorbent web at the site of the spill.

6 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw. De

☐ 7. Document ID: US 5395454 A

L7: Entry 7 of 16 File: USPT Mar 7, 1995

US-PAT-NO: 5395454
DOCUMENT-IDENTIFIER: US 5395454 A

TITLE: Method of cleaning elongated objects

DATE-ISSUED: March 7, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Robert; Marc J.	Tokyo			JP

US-CL-CURRENT: 134/6; 134/15, 134/7, 134/9

ABSTRACT:

Method and apparatus for cleaning elongated objects of surface contaminants. The elongated objects are exposed to a liquid or solid inert gas at suitable quantities to embrittle the contaminants. The elongated objects are then drawn through a die orifice causing the embrittled surface contaminants to be removed from the elongated objects.

13 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw. De

☐ 8. Document ID: US 5328518 A

L7: Entry 8 of 16 File: USPT Jul 12, 1994

US-PAT-NO: 5328518
DOCUMENT-IDENTIFIER: US 5328518 A

TITLE: Method for separating components of liquids in industrial process

DATE-ISSUED: July 12, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hamilton; C. Richard	Arvada	CO		
Sweeney; Eric L.	Lakewood	CO		

US-CL-CURRENT: 134/10; 134/26, 134/40, 210/772, 210/799, 427/353, 510/245, 510/364, 510/365, 510/463

ABSTRACT:

Disclosed is a process for separating components of liquids in industrial processes for cleaning of articles. The process is directed toward a terpene-based cleaning system including washing and rinsing of contaminated articles and which further includes separating components of used wash and/or rinse solutions into component parts so that terpene components of the solutions can be recycled for further washing and the water component of the solutions can be purified and recycled for rinsing. The method can include filtering a stream directly from the wash solution to avoid fouling of the filter. The method also includes using a cross flow filter having a pore size of between about 50 .ANG. and about 7,500 .ANG. to effectively separate water from remaining components of the contaminated wash solution.

28 Claims, 1 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

☐ 9. Document ID: US 5322570 A

L7: Entry 9 of 16 File: USPT Jun 21, 1994

US-PAT-NO: 5322570
DOCUMENT-IDENTIFIER: US 5322570 A

TITLE: Method and apparatus for cleaning feed rolls in food-processing machinery

DATE-ISSUED: June 21, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; Joseph R.	Rockford	MI		

US-CL-CURRENT: 134/18; 134/104.1, 134/115R, 134/201, 141/89, 141/91

ABSTRACT:

A cleaning apparatus for a quantity-metering device includes a housing and spray nozzles for dispensing fluid onto the feed rollers of the quantity-metering device and collecting the fluid together with media which is removed from said feed rollers. The cleaning apparatus includes manifolds which carry the nozzles. The cleaning apparatus is inserted in a location vacated by a component of said quantity-metering device.

18 Claims, 12 Drawing figures
Exemplary Claim Number: 17
Number of Drawing Sheets: 4

10. Document ID: US 5271773 A

L7: Entry 10 of 16 File: USPT Dec 21, 1993

US-PAT-NO: 5271773
DOCUMENT-IDENTIFIER: US 5271773 A
**** See image for Certificate of Correction ****

TITLE: Process for cleaning articles with an aqueous solution of terpene and recycle water after separation

DATE-ISSUED: December 21, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hamilton; C. Richard	Arvada	CO		
Gustafson; Ross M.	Golden	CO		

US-CL-CURRENT: 134/10; 134/26, 134/40, 510/238, 510/244, 510/245, 510/254, 510/365, 510/421, 510/432, 510/433, 510/437

ABSTRACT:

Disclosed is a composition and process for cleaning articles contaminated with water insoluble contaminants. The process allows for efficient recycling of components in the system. The wash solution effectively cleans water insoluble contaminants and, upon settling, quickly releases contaminants from the wash solution. In this manner, the wash solution and components of it can be readily recycled. The composition of the present invention includes between about 1.86 volume percent and about 37.2 volume percent terpene, preferably d-limonene, and between about 0.14 volume percent and about 2.8 volume percent surfactant.

19 Claims, 1 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

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Term	Documents
SPRAYING	283340
SPRAYINGS	445
(5 AND SPRAYING).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	16
(L5 AND SPRAYING).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	16

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